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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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7590 09/29/2003

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| EXAMINER |
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TORRES VELAZQUEZ, NORCA LIZ

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| ART UNIT | PAPER NUMBER |
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1771

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Application No.

09/896,058

Applicant(s)

ORITA ET AL.

Examiner

Norca L. Torres-Velazquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. It is noted that the Examiner received the VERIFIED STATEMENT filed on June 05, 2003 in which Applicants indicate that a copy of the English translation of Japanese Appln. No. 2000-199081 was included in that communication. However, only the cover sheet was received and not the certified English translation. The rejection of claim 1 under 35 U.S.C. 102(a) over MOTOGAMI et al. (JP 2000273762A) would be withdrawn once the translation is received.
2. The rejection of Claim 1 35 U.S.C. 102(b) as being anticipated by BRINK et al. (US 4,901,738) has been withdrawn since the reference fails to teach the claimed three dimensionally knitted base material and further because it fails to teach the use of metal plating to produce the conductive layer.
3. The rejection of Claims 1-5 under 35 U.S.C. 102(b) as being anticipated by OIKE et al. (JP 02082696A) has been withdrawn in view of Applicants' arguments stating that the OIKE et al. reference fails to suggest the three dimensionally knitted base material.
4. A copy of the English translation of the OIKE et al. (JP 02082696A) has been provided with this action.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over OIKE et al. (JP 02082696A) in view of ROELL (US 5,589,245).

OIKE et al. disclose a metal thin film laminate structure for electromagnetic wave shield. The reference discloses a non-conductive knit base comprising fibers such as polyethylene terephthalate. For the metal thin film layer it teaches the use of conductive materials such as metals of aluminum, copper, lead and niobate, etc., and alloys including those metals. The metal thin film layer is deposited in a vacuum on the opposite surfaces of the non-conductive base by vacuum deposition or ion plating. (Abstract)

However, the reference fails to teach that the knit base is three-dimensional.

ROELL discloses a textile spacer material that consists of two covering layers 1 and 2, preferably of knitted fabric, which are connected by the pile thread structure 3. (Column 1, lines 48-50) It is noted that the structure taught by ROELL reads on the claimed three dimensionally knitted base material composed of an upper ground structure, a lower ground structure and connection thread interconnecting the two layers. With regards to the heat-fusing thread, it is noted that the ROELL reference teaches that the mechanical and physiological properties of the textile spacer material can be varied depending in the selection of the thread material or other classic process parameter of production. The reference gives as example the use of a temperature sensitive material. (Refer to Column 4, lines 20-38) ROELL further teaches that the textile spacer material can be coated and/or the pile threads can be surface-modified. (Column 4, lines 56-60)

With regards to claims 8 and 9, it is the Examiner position that the ROELL reference teachings in which the materials used for the pile thread structure are dependent on the intended

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use of the structure, are broad and would encompass the use of heat-fusing threads with melting points in the range of 100 to 190 °C.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the knit fabric of the OIKE reference and provide with a three dimensional construction with the motivation of providing the base material with properties such as large air fraction, elastic behavior, shock-absorbing capability as disclosed by ROELL. (Column 4, lines 11-38).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over OIKE et al. and ROELL as applied to claim 1 above, and further in view of ENG et al. (US 5,532,052).

The OIKE et al. and ROELL references do not explicitly disclose the use of a Raschel structure.

ENG et al. disclose a camouflage material having radar screening properties comprised of a warp-knitted fabric, so-called Raschel fabric.

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the electromagnetic wave shield and provide it with a Raschel structure with the motivation of producing a light-weight knitted fabric as disclosed by ENG et al. (Refer to Column 1, lines 16-18 and lines 32-33).

8. Claim 1 is rejected under 35 U.S.C. 102(a) as anticipated by MOTOGAMI et al. (JP 2000273762A).

MOTOGAMI et al. discloses an electromagnetic wave-shielding material obtained by forming by a metal coating film on the surface of a base fabric by the electroless plating of copper and then impregnating the base fabric with an epoxy resin containing a conductive

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substance such as carbon particles. The base fabric preferably comprises at least one kind of heat-resistant organic fiber and has an average fineness of 0.5-5 denier, and includes a woven or knitted fabric. (Abstract)

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 703-306-5714. The examiner can normally be reached on Monday-Thursday 8:00-4:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

NLT

September 17, 2003

Elizabeth M. Cole
ELIZABETH M. COLE
PRIMARY EXAMINER